

### **ABSTRACT OF THE DISCLOSURE**

Amorphous silicon carbide thin film structures, including: protective coatings for  
5 windows in infrared process stream monitoring systems and sensor domes, heated  
windows, electromagnetic interference shielding members and integrated micromachined  
sensors; high-temperature sensors and circuits; and diffusion barrier layers in VLSI  
circuits. The amorphous silicon carbide thin film structures are readily formed, e.g., by  
sputtering at low temperatures.